



## Partners for A Clean Environment (PACE)

### Environmental Practices for Dental Offices

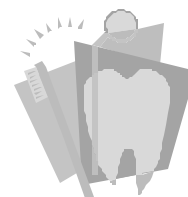
Dental offices generate relatively small quantities of hazardous wastes, but office staff often dispose of these wastes improperly. Colorado hazardous waste regulations require that the metal wastes listed in the following table are recycled or handled by a hazardous waste disposal company.

#### Sources of Pollution from Dental Offices

Waste Stream	Proper Management	Health/Environmental Concerns from Improper Management
Mercury from amalgam fillings (waste from chair-side traps, vacuum filters, etc.)	Collect amalgam waste, including waste from chair-side traps, and contract with a vendor for recycling. Chair-side traps should not be emptied down the drain.  Pollution Prevention Alternative: Use composite (mercury-free) fillings.	Discarding amalgam waste in the “red bag” or infectious waste container can cause release of toxic mercury vapor if the waste is incinerated.  Amalgam waste that goes down the drain cannot be extracted by wastewater treatment plants, and can contaminate local creeks and biosolids applied to farmland.
Silver from x-ray film and fixer	Collect film and fixer waste and contract with a vendor who recycles these wastes to recover silver.	Wastewater treatment plants cannot extract the silver from fixer that is poured down the drain. The silver ends up in creeks or in biosolids applied to farmland.
Chromium in x-ray system cleaners	Pollution Prevention Alternative: Use a non-chromium cleaner	Chromium cleaner that is poured down the drain can contaminate water and/or sludge from wastewater treatment plants.
Lead shields, bitewings, and foils from x-rays	Recycle. Lead shields can be sent to a dental charity for reuse.	Lead is a hazardous metal and may be released to the environment if disposed of with normal trash.

Partners for A Clean Environment (PACE) is a cooperative effort of the city of Boulder, Boulder County Health Department, the city of Longmont, and the Boulder Chamber of Commerce to assist local businesses with environmental efforts. PACE provides guidelines on choosing environmentally friendly products, recycling metal-bearing wastes, and correctly disposing of waste materials. Since the PACE program began working with dental offices in 1999, the amount of silver and mercury received at the city of Boulder wastewater treatment plant has decreased by 36% and 80% respectively. PACE offers a certification and recognition program for dental offices that complete a set of pollution prevention criteria. The program is free and voluntary. See the criteria on the reverse side of this sheet. As of January 2003, twenty-four dental offices have become partners in the PACE program.

**A list of recycling vendors, regulatory compliance information, a certified business list, and other resources are available on the PACE website at [www.pacepartners.com](http://www.pacepartners.com) or call 303-786-PACE.**



## PACE Criteria List for Dental Offices

Dental offices that meet these criteria qualify for PACE certification.

### Silver

- Used fixer is placed in a tightly sealed and labeled container. Fixer is recycled.

### Mercury (Hg)

- Pre-capsulated amalgam alloy is used.
- All materials that have minimal amalgam contamination, such as gauze, paper towels, and empty amalgam capsules, should be disposed with regular trash (not in red bag).
- Amalgam waste from the following sources is collected and recycled:
  - Excess – Retrieve excess amalgam during placement and dispose in the amalgam waste collection container.
  - Chair side – Disposable particle traps are preferred for chairs where amalgam placement or removal is performed. Place the entire disposable trap with amalgam waste in the amalgam waste collection container. If the office has reusable traps, all amalgam particles and teeth containing amalgam that can be reasonably removed from the trap is placed in the amalgam waste collection container.
  - Vacuum filter – Secondary filters in the vacuum system are changed once/month or more frequently if necessary. Place the entire filter in the amalgam waste collection containers.
- Amalgam waste is stored in an airtight and properly labeled container.

### Chromium

- Chromium-free X-ray system cleaners are used. (No dichromate listed on product label or material safety data sheet)

### Lead

- Lead shields, bitewings, and foils are recycled or sent to a dental charity.

### Water and Electricity

- The office is aware of the requirements for backflow prevention.
- The vacuum system is turned off after hours.
- PACE staff have provided a resource sheet on vacuum systems/ compressors, and office staff have reviewed the information.

### Recycling

- Office paper (paper, envelopes, manila folders, mail, pamphlets, brochures, catalogs, and magazines) is recycled.
- Co-mingled containers (aluminum, glass, plastic 1&2, milk and juice) are recycled.
- Recycled paper products are used wherever possible. At a minimum, office paper should have at least 30% post-consumer content.

### Training

- The “Best Management Practices for Dental Waste” brochure is available and read by all office staff.

### General PACE Requirements

- Agree to be a pollution prevention information resource for at least one other business.
- To the best of your knowledge, the clinic is in compliance with local, state, and federal environmental regulations.

### Additional Pollution Prevention Measures

These measures are **not required** for certification. PACE staff ask whether the clinic is aware of these additional pollution prevention measures and tracks which clinics have them in place.

- Advanced mercury collection system
- Digital Radiovisiography
- “Mercury-free” filling placements